Online Appendix (not for publication)

A Coverage Ratio for Key Variables: KISVALUE vs. Aggregate Data

Table 12: Coverage Ratios of KISVALUE Dataset

Coverage Ratio (%)*					
Year	Cash	ST Debt	LT Debt	AR	Total Assets
2001	No aggregate data available from Bank of Korea				
2002	No aggregate data available from Bank of Korea				
2003	No aggregate data available from Bank of Korea				
2004	37.8	65.0	86.9	59.9	71.3
2005	41.3	62.8	77.4	55.3	68.9
2006	39.5	67.1	95.8	56.3	68.9
2007	73.4	57.4	99.5	57.6	73.2
2008	61.9	58.4	74.4	50.3	66.0
2009	59.2	50.7	47.9	52.5	56.7
2010	60.0	56.0	51.1	56.6	59.2
2011	62.3	59.5	53.3	56.8	61.8
2012	63.9	59.7	60.5	56.9	63.8
2013	61.5	59.6	64.1	54.4	63.1
2014	60.6	57.9	65.9	56.3	65.2
2015	62.3	58.8	69.9	54.9	65.8
2016	59.8	58.0	70.8	53.9	64.3
2017	57.8	58.0	65.5	54.4	63.6

Notes: The coverage ratio is defined as the KISVALUE aggregate across firm in a particular year divided by the aggregate data from Bank of Korea in the same year.

B Summary Statistics

Table 13: Statistics of Firm-level Variables

Variable	% of firm year observation
Firms with debt	0.76
Firms with ST debt	0.65
Firms with LT debt	0.57
Firms with FC debt	0.12
Firms with FC ST debt	0.09
Firms with FC LT debt	0.05
Variable	Average
FC Share of ST Debt , conditional on non zero FC ST debt	0.33
FC Share of LT Debt , conditional on non zero FC LT debt	0.43
FC Share of Debt , conditional on non zero FC debt	0.29

Table 14: Summary Statistics of Firm-level Variables, Conditional on Positive FC Debt

Variable	Mean	Standard deviation	25%tile	Median	75%tile
LC Total/TA(t-1)	0.256	0.180	0.119	0.219	0.359
LC Cash/TA(t-1)	0.049	0.076	0.006	0.022	0.060
LC Short-term FI/TA(t-1)	0.045	0.085	0.000	0.012	0.050
LC AR/TA(t-1)	0.166	0.136	0.059	0.137	0.242
FC Total/TA(t-1)	0.051	0.102	0.000	0.005	0.058
FC Cash/TA(t-1)	0.010	0.035	0.000	0.000	0.004
FC Short-term FI/TA(t-1)	0.001	0.014	0.000	0.000	0.000
FC AR/TA(t-1)	0.041	0.088	0.000	0.000	0.042
ST FC debt/TA(t-1)	0.076	0.119	0.000	0.030	0.100
LT FC debt/TA(t-1)	0.050	0.117	0.000	0.000	0.039
ST total debt/TA(t-1)	0.248	0.193	0.092	0.219	0.368
LT total debt/TA(t-1)	0.144	0.175	0.010	0.080	0.212
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.000	0.107	0.000	0.000	0.009

Table 15: Summary Statistics of Firm-level Variables

Variable	Mean	Standard deviation	25% tile	Median	75%tile
LC Total Liquid/TA(t-1)	0.275	0.221	0.091	0.229	0.415
LC Cash/TA(t-1)	0.079	0.122	0.008	0.032	0.095
LC Short-term FI/TA(t-1)	0.053	0.110	0.000	0.007	0.051
LC AR/TA(t-1)	0.154	0.153	0.016	0.113	0.244
FC Total Liquid/TA(t-1)	0.025	0.078	0.000	0.000	0.002
FC Cash/TA(t-1)	0.007	0.033	0.000	0.000	0.000
FC Short-term FI/TA(t-1)	0.001	0.012	0.000	0.000	0.000
FC AR/TA(t-1)	0.017	0.063	0.000	0.000	0.000
ST FC debt/TA(t-1)	0.010	0.051	0.000	0.000	0.000
LT FC debt/TA(t-1)	0.007	0.047	0.000	0.000	0.000
ST total debt/TA(t-1)	0.180	0.205	0.000	0.112	0.293
LT total debt/TA(t-1)	0.157	0.220	0.000	0.052	0.239
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.005	0.103	0.000	0.000	0.000

C All Tables in Main Text with *All* Sample (Not Only Issuance Year)

Table 16: FC Debt and Liquid Assets, Equation (1)

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	14.5***	7.7***	10.0***	-2.0	11.7***	2.6***	0.5***	9.3***
	(3.3)	(1.5)	(1.0)	(1.9)	(1.8)	(0.4)	(0.2)	(1.5)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-7.3***	-0.1	-0.2	-7.1***	4.2***	1.5**	0.3*	2.6***
	(1.8)	(0.9)	(0.7)	(1.0)	(1.1)	(0.6)	(0.2)	(0.5)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.1***	-12.0***	-9.5***	-1.4**	-1.0***	-1.2***	-0.1***	0.2
	(1.5)	(1.1)	(0.5)	(0.6)	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.3***	-7.9***	-7.8***	-5.6***	-3.0***	-1.2***	-0.1***	-1.7***
	(2.4)	(1.1)	(0.4)	(1.2)	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***	0.5***	0.0	0.0	0.5***
	(0.3)	(0.1)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.8***	0.0	-1.7***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.8)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.30	0.16	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.11	0.09	0.04	0.03	0.02	0.01	0.00	0.02
N	241068	255320	256267	244355	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are described as the column headers (normalized by total assets at $t-1$), which are cash and cash equivalents, short-term financial instruments, accounts receivable, and the sum of the three in local currency (LC) and foreign currency (FC). *TA* is total assets and *OS* is the cashflow from other sources. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 17: FC Debt and Liquid Assets – Current Portion of Long-term Debt

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	14.6***	7.7***	10.0***	-2.0	11.7***	2.6***	0.5***	9.3***
	(3.3)	(1.5)	(1.0)	(1.9)	(1.8)	(0.4)	(0.2)	(1.5)
$\frac{\text{Current } LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-32.0***	-6.2***	-9.8***	-17.0***	3.7**	1.1	-0.0	3.3***
	(3.9)	(1.5)	(1.5)	(2.8)	(1.5)	(0.9)	(0.1)	(1.2)
$\frac{\text{Rest of } LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-0.8	1.5	2.2***	-4.5***	4.4***	1.6***	0.4*	2.4***
	(2.3)	(1.2)	(0.8)	(1.1)	(1.1)	(0.6)	(0.2)	(0.5)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.1***	-12.0***	-9.5***	-1.4**	-1.0***	-1.2***	-0.1***	0.2
	(1.5)	(1.1)	(0.5)	(0.6)	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.5***	-7.9***	-7.8***	-5.7***	-3.0***	-1.2***	-0.1***	-1.7***
	(2.4)	(1.1)	(0.4)	(1.2)	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***	0.5***	0.0	0.0	0.5***
	(0.3)	(0.1)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.8***	0.0	-1.7***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.8)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.31	0.16	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.11	0.09	0.04	0.03	0.02	0.01	0.00	0.02
N	241068	255320	256267	244355	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). *TA* is total assets and *OS* is the cashflow from other sources. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 18: FC Debt and Liquid Assets – Listed vs. Non-Listed Firms

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI FI	AR	Sum	Cash	Short-term FI FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	13.0***	6.6***	10.3***	-3.0	11.3***	2.6***	0.5***	8.8***
	(3.2)	(1.5)	(1.0)	(2.0)	(1.8)	(0.4)	(0.2)	(1.5)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	12.1**	7.0***	-3.1	7.8**	3.8	-0.5	-0.2	4.1
$\times Listed$	(4.7)	(2.3)	(2.6)	(3.7)	(3.6)	(0.6)	(0.2)	(3.4)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-6.7***	0.1	0.0	-6.8***	3.8***	1.5**	0.3*	2.2***
	(1.9)	(1.0)	(0.8)	(1.1)	(1.2)	(0.6)	(0.2)	(0.5)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-4.9	-0.2	-2.6	-3.2	4.5	-0.1	-0.4*	4.7*
$\times Listed$	(4.1)	(2.0)	(3.0)	(2.6)	(2.9)	(0.8)	(0.2)	(2.6)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.0***	-11.8***	-9.5***	-1.4**	-1.0***	-1.2***	-0.1***	0.2
	(1.5)	(1.1)	(0.5)	(0.6)	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.3***	-7.8***	-7.7***	-5.7***	-3.0***	-1.2***	-0.1***	-1.7***
	(2.4)	(1.1)	(0.4)	(1.2)	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.6***	-1.9***	-0.5***	-1.7***	0.5***	0.0*	0.0*	0.5***
	(0.3)	(0.2)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.7***	0.0	-1.7***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.8)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Listed	1.3**	1.5***	1.0***	-0.2	-0.2	-0.1**	-0.0	-0.1
	(0.6)	(0.3)	(0.3)	(0.4)	(0.2)	(0.1)	(0.0)	(0.2)
Adjusted R^2	0.31	0.17	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.11	0.09	0.04	0.03	0.02	0.01	0.00	0.02
N	241068	255320	256267	244355	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). *TA* is total assets and *OS* is the cashflow from other sources. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 19: FC Debt and Interest Income, Equation (2)

	Gross Interest Rate Income
	(1)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	0.307***
	(0.057)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-0.032
	(0.055)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-0.408***
	(0.024)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-0.457***
	(0.031)
$lnTA_{i,t-1}$	-0.001
	(0.007)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.375***
	(0.039)
Adjusted R^2	0.09
Within R^2	0.02
N	241068

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variable is gross interest income from the cash flow statement. *TA* is total assets and *OS* is the cashflow from other sources. All regressions include sector and year fixed effects. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 20: FC Debt and LC Liquid Assets
– Carry Trades and Interest Rate Differential, Equation (3)

	Local Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	12.4***	6.6***	8.7***	-1.7
	(3.3)	(1.6)	(0.9)	(2.2)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-7.2***	-0.1	-0.2	-7.1***
	(1.8)	(0.9)	(0.7)	(1.0)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times \frac{i_t^{diff}}{3mFXvol_t}$	13.2**	6.7***	7.8**	-2.2
	(5.9)	(2.3)	(3.5)	(3.9)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.1***	-12.0***	-9.5***	-1.4**
	(1.5)	(1.1)	(0.5)	(0.6)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.3***	-7.9***	-7.8***	-5.6***
	(2.4)	(1.1)	(0.4)	(1.2)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***
	(0.3)	(0.1)	(0.1)	(0.2)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.8***	0.0	-1.7***
	(1.1)	(0.8)	(0.0)	(0.5)
Adjusted R^2	0.30	0.16	0.09	0.29
Within R^2	0.11	0.09	0.04	0.03
N	241068	255320	256267	244355

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). $i_t^{diff} = i_t^{KRW} - i_t^{USD}$ is the money market interest rate differential. $3mFXvol$ is the implied volatility imputed from 3-month at-the-money exchange rate options. TA is total assets and OS is the cashflow from other sources. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 21: FC Debt and FC Liquid Assets – FX Risk Buffers and FX Volatility, Equation (4)

	Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	11.6***	2.5***	0.4***	9.4***
	(1.8)	(0.4)	(0.2)	(1.5)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	4.3***	1.5***	0.3*	2.6***
	(1.1)	(0.6)	(0.2)	(0.5)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times (3mFXvol_t)$	0.4	0.5***	0.2**	-0.2
	(0.4)	(0.1)	(0.1)	(0.5)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}} \times (1yFXvol_t)$	-0.7	-0.1	0.1	-0.6**
	(0.4)	(0.3)	(0.0)	(0.3)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-1.0***	-1.2***	-0.1***	0.2
	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-3.0***	-1.2***	-0.1***	-1.7***
	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	0.5***	0.0	0.0	0.5***
	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.0*	0.0	0.0	0.0***
	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.11	0.05	0.01	0.10
Within R^2	0.02	0.01	0.00	0.02
N	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). $1yFXvol$ and $3mFXvol$ are the implied volatility imputed from at-the-money exchange rate options. TA is total assets and OS is the cashflow from other sources. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 22: FC Debt and FC Liquid Assets
– FX Risk Buffers and Sectoral Exposure to FX Risk, Equation (5)

	Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	9.4***	2.0***	0.8**	7.0***
	(2.3)	(0.4)	(0.4)	(1.9)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times SectorFXBeta_c$	-2.9*	-0.6**	0.5	-2.9*
	(1.7)	(0.3)	(0.3)	(1.6)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	4.6***	1.8***	0.2	2.9***
	(1.3)	(0.6)	(0.1)	(0.8)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}} \times SectorFXBeta_c$	0.5	0.3	-0.1	0.4
	(0.9)	(0.3)	(0.1)	(0.6)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-1.0***	-1.2***	-0.1***	0.2
	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-3.0***	-1.2***	-0.1***	-1.7***
	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	0.5***	0.0	0.0	0.5***
	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.0*	0.0	0.0	0.0***
	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.11	0.05	0.01	0.10
Within R^2	0.02	0.01	0.00	0.02
N	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are in the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in foreign currency (FC), and the sum of three. $SectorFXBeta_c$ is the sensitivity of each sector's sales to the exchange rate, the KRW price of USD. TA is total assets and OS is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 23: FC Debt and Liquid Assets – Sectoral Financial Dependence, Equation (6)

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	12.7***	7.0***	9.3***	-2.3	10.7***	2.4***	-0.2	9.1***
	(3.6)	(1.6)	(1.2)	(1.8)	(1.8)	(0.4)	(0.2)	(1.5)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	1.8	0.6	0.7	0.2	1.0*	0.1	0.7***	0.3
$\times FinDep_c$	(1.9)	(0.8)	(0.8)	(0.4)	(0.5)	(0.2)	(0.0)	(0.5)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-7.3***	-0.1	-0.2	-7.1***	4.2***	1.5**	0.3*	2.6***
	(1.8)	(0.9)	(0.7)	(1.0)	(1.1)	(0.6)	(0.2)	(0.5)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.1***	-12.0***	-9.5***	-1.4**	-1.0***	-1.2***	-0.1***	0.2
	(1.5)	(1.1)	(0.5)	(0.6)	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.3***	-7.9***	-7.8***	-5.6***	-3.0***	-1.2***	-0.1***	-1.7***
	(2.4)	(1.1)	(0.4)	(1.2)	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***	0.5***	0.0	0.0	0.5***
	(0.3)	(0.1)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.8***	0.0	-1.7***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.8)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.30	0.16	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.11	0.09	0.04	0.03	0.02	0.01	0.00	0.02
N	241068	255320	256267	244355	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). $FinDep_c$ is sectoral financial dependence ratio constructed as in Rajan and Zingales (1998). *TA* is total assets and *OS* is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 24: FC Debt and Liquid Assets – Sectoral Export and Import Shares, Equation (7)

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	19.9***	7.0***	10.4***	3.8	2.0	1.6**	0.4	1.0
	(5.0)	(2.0)	(1.6)	(2.9)	(2.4)	(0.7)	(0.4)	(2.3)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times ExportShare_c$	4.6	6.5	4.9	-5.3	32.1***	1.6	-1.6	33.2***
	(21.1)	(7.7)	(9.4)	(13.6)	(10.1)	(2.1)	(1.7)	(9.6)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times ImportShare_c$	-40.1	-2.4	-7.4	-33.1	32.5	5.2	2.3	22.1
	(28.8)	(9.5)	(7.1)	(22.1)	(20.0)	(3.5)	(1.7)	(16.6)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-7.2***	-0.1	-0.3	-6.9***	4.0***	1.5**	0.3*	2.3***
	(1.8)	(1.0)	(0.7)	(1.0)	(1.0)	(0.6)	(0.2)	(0.5)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-22.1***	-12.0***	-9.5***	-1.4**	-1.0***	-1.2***	-0.1***	0.2
	(1.5)	(1.1)	(0.5)	(0.6)	(0.4)	(0.2)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-20.4***	-7.9***	-7.8***	-5.7***	-3.0***	-1.2***	-0.1***	-1.7***
	(2.4)	(1.1)	(0.4)	(1.2)	(0.5)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***	0.5***	0.0	0.0	0.5***
	(0.3)	(0.1)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	13.9***	10.8***	0.0	-1.7***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.8)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.31	0.16	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.11	0.09	0.04	0.03	0.03	0.01	0.00	0.02
N	241068	255320	256267	244355	256506	256680	256710	256613

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). $ExportShare_c$ and $ImportShare_c$ are sectoral export and import share of output constructed from Bank of Korea data. TA is total assets and OS is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 25: FC Debt and Liquid Assets – Pre- and Post-2008

	Local Currency Liquid Assets				Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	14.5***	9.9***	7.3***	-1.7	9.7***	2.1***	0.4**	8.1***
	(2.9)	(1.5)	(1.1)	(1.9)	(1.3)	(0.6)	(0.2)	(1.2)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	-0.2	-3.6***	4.2***	-0.7	3.3*	0.8	0.0	2.0
×Post2008	(3.2)	(1.1)	(1.6)	(1.7)	(1.7)	(0.6)	(0.2)	(1.6)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-5.5**	0.6	-0.1	-6.2***	3.8***	0.9**	0.2	2.8***
	(2.2)	(1.0)	(0.9)	(1.2)	(0.9)	(0.4)	(0.1)	(0.6)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-6.8***	-2.6**	-1.8	-2.5	0.7	1.0*	0.2***	-0.4
×Post2008	(2.3)	(1.1)	(1.3)	(1.6)	(1.0)	(0.6)	(0.1)	(0.8)
$\frac{ST\ \ debt_{i,t}}{TA_{i,t-1}}$	-17.4***	-11.0***	-7.2***	-0.3	-0.7**	-0.6***	-0.1***	-0.1
	(1.0)	(0.9)	(0.5)	(0.7)	(0.3)	(0.1)	(0.0)	(0.3)
$\frac{ST\ \ debt_{i,t}}{TA_{i,t-1}}$	-7.2***	-1.5*	-3.7***	-1.7***	-0.5	-0.9***	-0.1	0.4*
×Post2008	(2.0)	(0.9)	(0.9)	(0.6)	(0.3)	(0.2)	(0.0)	(0.2)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-17.6***	-7.0***	-6.3***	-5.5***	-2.4***	-0.7***	-0.1***	-1.7***
	(1.6)	(0.8)	(0.3)	(1.1)	(0.4)	(0.1)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-3.8**	-1.3*	-2.2***	-0.2	-0.8*	-0.7***	-0.1***	-0.0
×Post2008	(1.6)	(0.8)	(0.5)	(0.7)	(0.4)	(0.2)	(0.0)	(0.3)
$lnTA_{i,t-1}$	-3.5***	-1.8***	-0.4***	-1.7***	0.5***	0.0	0.0	0.5***
	(0.3)	(0.1)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	14.6***	11.0***	0.0	-1.6***	0.0*	0.0	0.0	0.0***
	(1.1)	(0.9)	(0.0)	(0.5)	(0.0)	(0.0)	(0.0)	(0.0)
Adjusted R^2	0.31	0.17	0.09	0.29	0.11	0.05	0.01	0.10
Within R^2	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
N	241068	255320	256267	244355	256506	256680	256710	256613

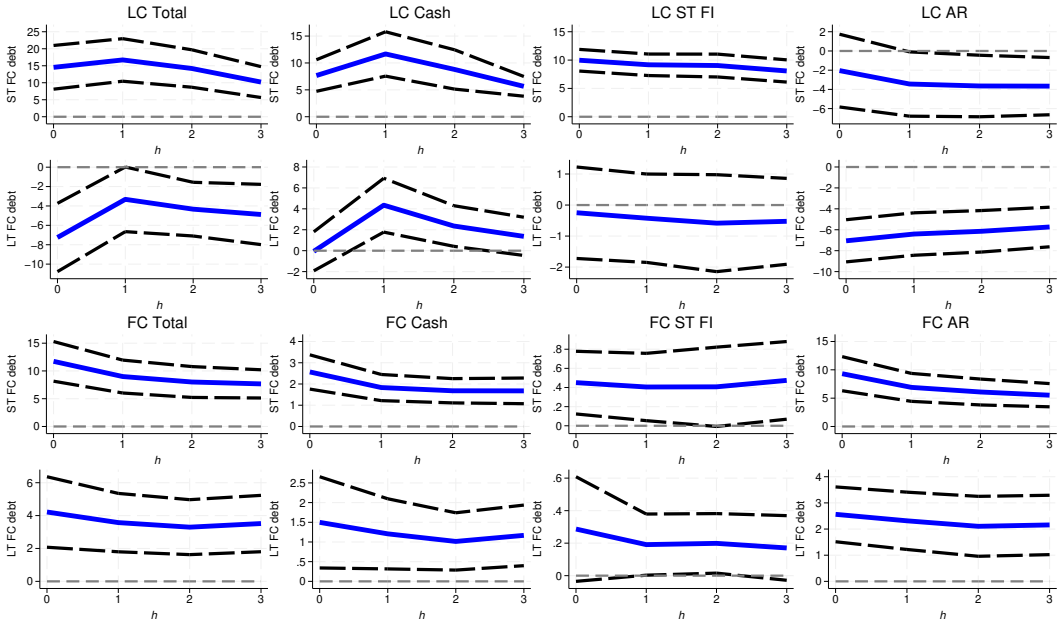
Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). *TA* is total assets and *OS* is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Table 26: FC Debt, and Investment and Dividend

	CapEx	Dividend Payout
	(1)	(2)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	-3.7***	-0.1**
	(0.6)	(0.1)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	7.3***	-0.3***
	(2.1)	(0.1)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	5.1***	-0.5***
	(0.5)	(0.1)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	13.6***	-0.4***
	(1.6)	(0.0)
$lnTA_{i,t-1}$	-0.7***	0.1***
	(0.1)	(0.0)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	-8.6***	0.0
	(1.6)	(0.0)
Adjusted R^2	0.18	0.04
Within R^2	0.11	0.02
N	213381	256703

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are capital expenditure (CapEx) and dividend payout. *TA* is total assets and *OS* is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

Figure 5: FC Debt and Liquid Assets: Dynamic Relationship via Local Projections (eq(8))



Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). The regression control for lagged log total assets and cashflow from other sources (normalized by total assets at $t-1$). The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. All regressions include sector and year fixed effects. 95% confidence interval from standard errors clustering at sector level are displayed as black dash lines.

D Carry Trade Returns with Longer Maturity Debt

To illustrate the relative attractiveness of conducting carry trade is decreasing with the debt maturity, we report the averages and the standard deviations of *quarterly holding period return* of saving in KRW one-year liquid assets financed by borrowing in USD at one-year, three-year and five-year maturities abstracting away from exchange rate changes.[21]

Specifically, we use the KRW interest rates of Korean government bonds and the USD interest rates of US government bonds across maturities, and compute the quarterly log holding period returns at the monthly date t of n-quarter Korean and U.S. government bonds, both denominated in their local currency. The annualized interest rate on a Korean government bond at the monthly date t of n-quarter maturity are denoted as $y_{n,t}^{KRW}$, and are collected from Du and Schreger (2017) dataset.The annualized interest rate on a U.S. government bond at the monthly date $t$of n-quarter maturity are denoted as $y_{n,t}^{USD}$, and are collected from the Bloomberg Terminal. The quarterly holding period (3-month period) returns at the monthly date t are computed as:

$$r_{n,t}^{KRW} = \tau_{n,t} y_{n,t}^{KRW} - (\tau_{n,t} - \frac{1}{4}) y_{n-1,t+3}^{KRW}, \text{ and } r_{n,t}^{USD} = \tau_{n,t} y_{n,t}^{USD} - (\tau_{n,t} - \frac{1}{4}) y_{n-1,t+3}^{USD},$$

where $\tau_{n,t}$is the duration of the KRW or USD bond in years.[22] We then compare the quarterly log holding period returns of one-year Korean government bonds minus that of one-year ($r_{4,t}^{KRW}$-$r_{4,t}^{USD}$) , 3-year ($r_{4,t}^{KRW}$-$r_{12,t}^{USD}$) or 5-year ($r_{4,t}^{KRW}$-$r_{20,t}^{USD}$) U.S. government bonds. In Figure 6, we clearly see that the average of quarterly holding returns is lower and the standard deviation is higher when one borrows in USD at a longer-term maturity. For instance, the mean of the quarterly holding period returns of one-year Korean government bonds minus that of one-year U.S.

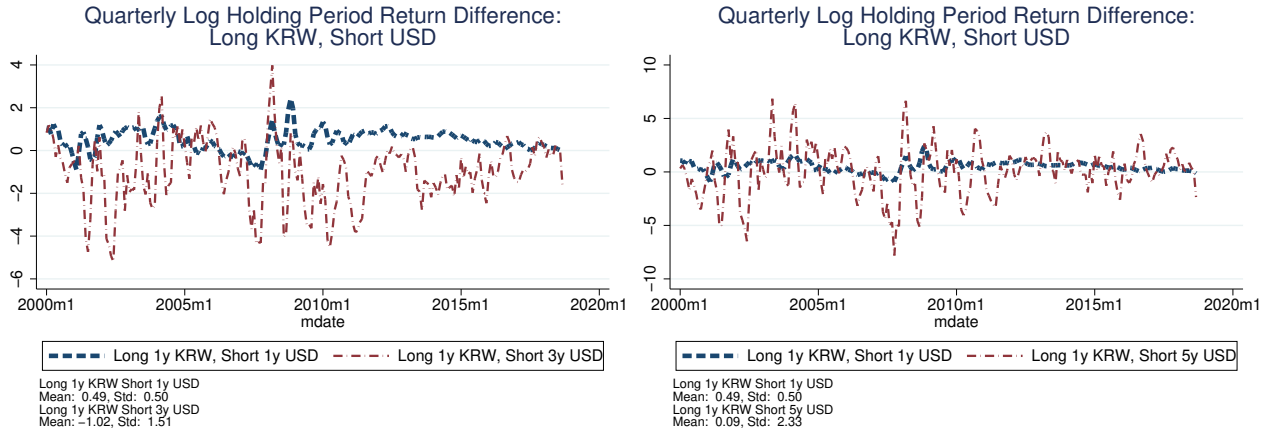
[21] We have not included neither ex-post nor ex-ante quarterly exchange rate changes when computing the quarterly holding returns as they do not affect the relative attractiveness of USD financing at different maturities; all financing options face the same exchange rate changes (both ex-ante and ex-post) over the same quarter.

[22] In practice, following Du et al. (2016), we approximate $y_{n-1,t+3}$ by $y_{n,t+3}$ for the quarterly holding period (3-month period). We also make an approximation that $\tau_{n,t}$ is $\frac{n}{4}$.

government bonds, $r_{4,t}^{KRW}$-$r_{4,t}^{USD}$, has a mean of 0.49 and a standard deviation of 0.50 in 2000m1-2018m12, while the quarterly holding period returns of one-year Korean government bonds minus that of 3-year U.S. government bonds $r_{4,t}^{KRW}$-$r_{12,t}^{USD}$, has a lower mean of -1.02 and a higher standard deviation of 1.51 in 2000m1-2018m12.

In sum, we find that using longer-term instruments to finance firms' saving in KRW liquid assets is not ideal as the quarterly returns are on average lower and more volatile when the liability maturity increases. In other words, the Sharpe ratio of carry trade using longer maturity FC debt is much lower. We believe this is the reason that firms do not use long-term FC debt to conduct their carry trade.

Figure 6: Differences in Quarterly Holding Period Returns of KRW Liquid Assets and USD Liquid Assets Across Maturities

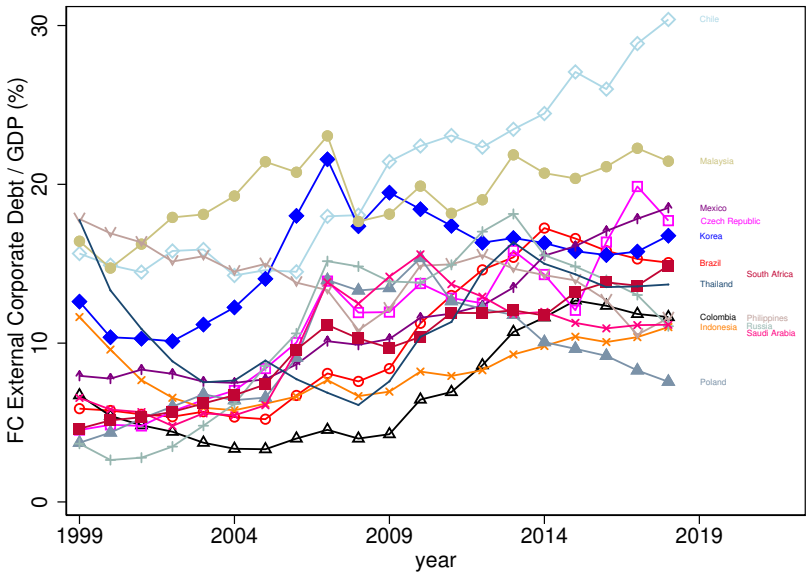


Notes: The figures show the quarterly log holding period return differences between (i) one-year KRW Korean government bonds and one-year U.S. government bonds; and (ii) one-year KRW Korean government bonds and three-year U.S. government bonds; and (iii) one-year KRW Korean government bonds and five-year U.S. government bonds. The mean and the standard deviation of each of time series are reported. We have not included neither ex-post nor ex-ante quarterly exchange rate changes when computing as it does not affect the relative attractiveness of USD financing at different maturities as they all face the same exchange rate changes (both ex-ante and ex-post) over a quarter.

E FC Debt Across Countries

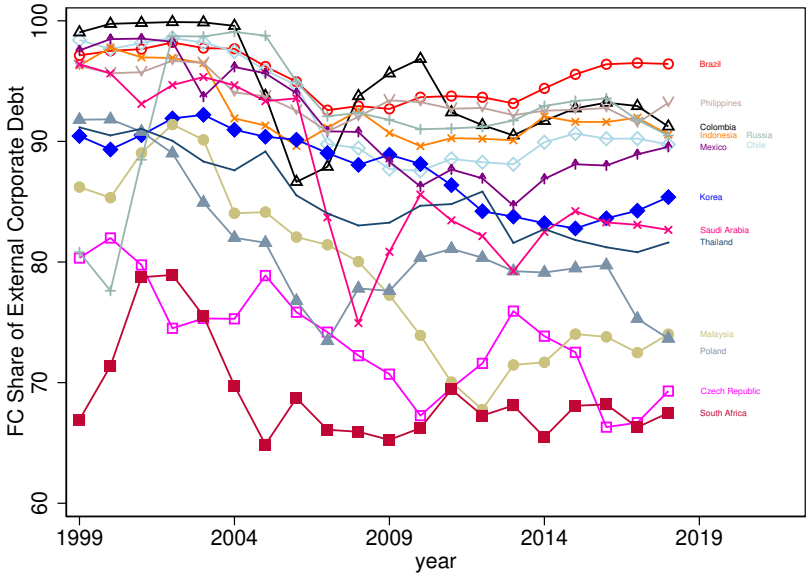
We use the BIS data to construct the time series of FC external debt for 14 countries: Brazil, Chile, Colombia, Czech Republic, Indonesia, Korea, Malaysia, Mexico, Philippines, Poland, Russia, Saudi Arabia, South Africa, Thailand. We report FC external corporate debt to GDP in Figure 7 and FC share of external corporate debt – FC external corporate debt / (FC external corporate debt + LC external corporate debt) – in Figure 8. As shown in Figure 7, we observe a significant presence of FC external corporate debt in other emerging economies and show that FC borrowing is not a particular phenomenon in Korea. Compared to Korea – depicted in blue, the majority of countries show a similar or even higher level of FC external debt to GDP ratios. It reaffirms that many emerging economies are as dollarized as Korea. In terms of the currency composition of external corporate debt, Korea is at the median with 85%, and most of countries have the average FC share of external corporate debt higher than 80%. Overall, this provides external validation to our analysis that Korea is representative in this group of countries.

Figure 7: Cross-Country Analysis: FC External Corporate Debt/GDP



Notes: The data are from the Bank of International Settlements. The dataset includes external debt denominated in foreign currency. The time series for 14 countries are plotted, and that of Korea is colored in blue. The time series show the FC debt to GDP ratios from 1999 to 2018 for each country.

Figure 8: Cross-Country Analysis: FC Share of External Corporate Debt



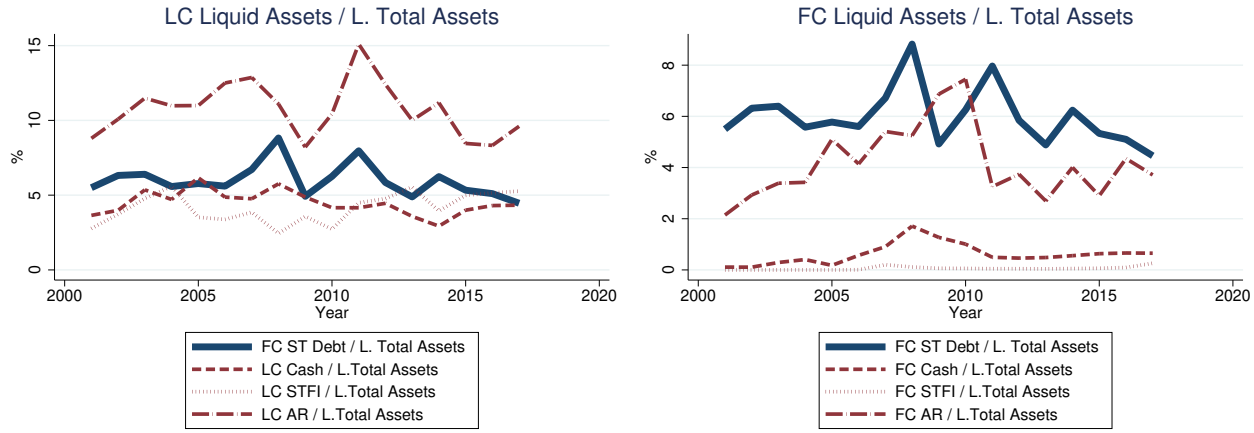
Notes: The data are from the Bank of International Settlements. The dataset includes external debt denominated in foreign currency. The time series for 14 countries are plotted, and that of Korea is colored in blue. The time series show the FC share of external corporate debt from 1999 to 2018 for each country.

F Other Figures: FC Debt

Similar to Figure 3, we show that the quantitative magnitude of foreign currency borrowing is fairly similar to that of LC and FC liquid assets on firms' balances sheets.

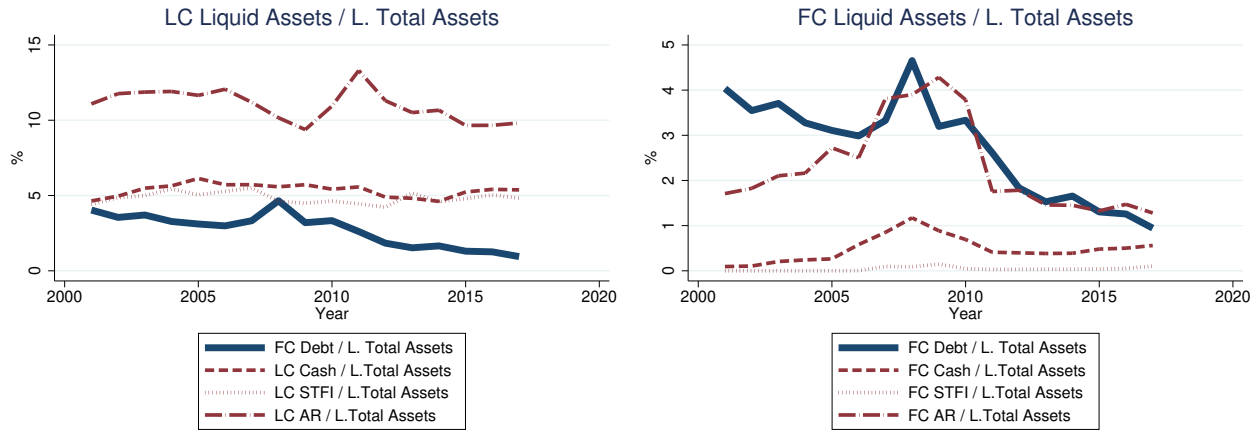
Figure 9 uses a subsample of firms with positive FC short-term debt when aggregating firm-level variables. Conditional on positive holdings of FC short-term debt, the average FC short-term debt as a ratio of aggregate total assets in the previous year is around 4 to 9%, and they are fairly comparable to the size of each instrument of FC or LC liquid assets. Figure 10 shows two subfigures: (i) the aggregate FC debt (blue solid line) and the aggregate LC liquid assets by instruments (red lines), and (ii) the aggregate FC debt (blue solid line) and the aggregate FC liquid assets by instrument (red lines). Figure 11 depicts the same patterns but uses a subsample of firms with positive FC debt.

Figure 9: Short-term FC Debt, and LC and FC Liquid Assets, Conditional on Positive Short-term FC Debt



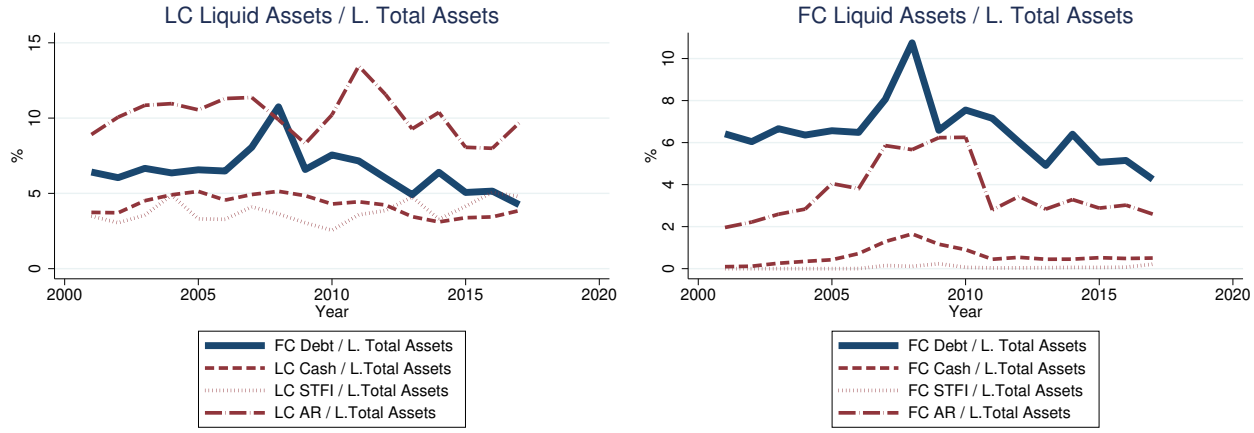
Notes: All the data come from the KISVALUE dataset. All the variables are normalized by the aggregate total assets in the previous year. The LHS figure shows the aggregate FC short-term debt (blue solid line) and the aggregate LC liquid assets by instruments (red lines), using a subsample of firms with positive FC short-term debt. The RHS figure shows the aggregate FC short-term debt (blue solid line) and the aggregate FC liquid assets by instruments (red lines), using a subsample of firms with positive FC short-term debt.

Figure 10: FC Debt, and LC and FC Liquid Assets



Notes: All the data come from the KISVALUE dataset. All the variables are normalized by the aggregate total assets in the previous year. The LHS figure shows the aggregate FC debt (blue solid line) and the aggregate LC liquid assets by instruments (red lines). The RHS figure shows the aggregate FC debt (blue solid line) and the aggregate FC liquid assets by instruments (red lines).

Figure 11: FC Debt, and LC and FC Liquid Assets, Conditional on Positive FC Debt

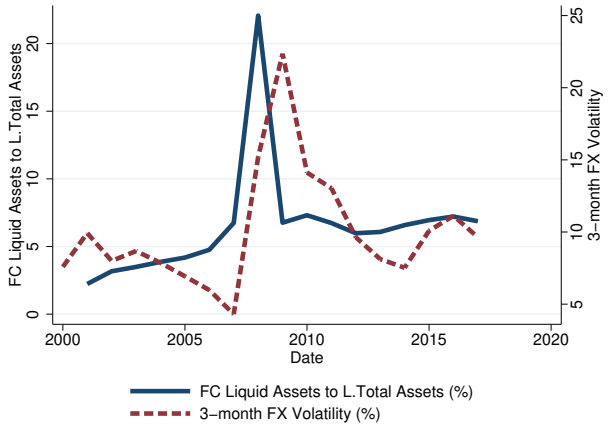


Notes: All the data come from the KISVALUE dataset. All the variables are normalized by the aggregate total assets in the previous year. The LHS figure shows the aggregate FC debt (blue solid line) and the aggregate LC liquid assets by instruments (red lines), using a subsample of firms with positive FC debt. The RHS figure shows the aggregate FC debt (blue solid line) and the aggregate FC liquid assets by instruments (red lines), using a subsample of firms with positive FC debt. All the series are normalized by the aggregate total assets in the previous year.

For each year, we first compute the cross-sectional average of firm-level ratios of total FC liquid assets to lagged total assets across firms with *positive* short-term FC debt. Figure 12 plots it against the 3-month implied exchange rate volatility of KRW. The correlation is 0.41, positive and high. It shows that firms borrow in short-term FC debt on average hold more FC liquid assets in a

times of heightened FX volatility. This strong positive correlation affirms our view that a positive correlation of FC liquid assets and FC short-term borrowing is associated with firms' saving against FX risk.

Figure 12: FC Liquid Assets and FX Volatility



Notes: The figure shows the 3-month implied FX volatility from the Bloomberg Terminal as a red dashed line. For each year, we compute the cross-sectional average of firm-level ratios of total FC liquid assets to lagged total assets, employing a subsample of firms with positive short-term FC debt, and it's depicted as a blue solid line.

G Robustness Checks

G.1 Alternative Specification for Interest Income from Carry Trades

As a different illustration of the results shown in 3.4, we construct a measure of the predicted carry trade income. We first estimate Equation (1) with a dependent variable, $\frac{\text{Sum LC LiquidAssets}_{i,t}}{TA_{i,t-1}}$ where *Sum LC LiquidAssets* is the sum of three items of LC liquid assets. We then compute the predicted LC liquid assets that a firm holds when borrowing in short-term FC debt, $\hat{\beta}^{STFC}\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$. It captures the regression-implied average size of LC liquid assets that goes to carry trades.The fitted values are then multiplied by the average short-term Korea interest rate, which gives us a predicted regression-implied carry trade income ($Predicted\ \ GII_{\text{carrytrade}} = \hat{\beta}^{STFC}\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times i^{KR}$). We then compare the predicted carry trade income with the gross interest income, $GII_{i,t}$, on cash flow statements. We perform the following regression and control for the other debt financing and other sources of income:

$$\begin{aligned} GII_{i,t} \quad &= \beta_1 Predicted\ \ GII_{\text{carrytrade}} + \beta^{STLC}\frac{ST\ LCdebt_{i,t}}{TA_{i,t-1}} \\ &+ \beta^{LTFC}\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}} + \beta^{LTLC}\frac{LT\ LCdebt_{i,t}}{TA_{i,t-1}} \\ &+ \gamma_1\frac{OS_{i,t}}{TA_{i,t-1}} + \gamma_2 lnTA_{i,t-1} + \alpha + \alpha_c + \alpha_t + \varepsilon_{i,t} \end{aligned} \tag{9}$$

If the predicted carry trade return is a good proxy, we should expect $\beta_1 = 1$. Table 27 reports the estimates of regression (9). We find that β_1 is estimated to be 0.832 with a standard error of 0.142. This result means that 83% of the predicted carry trade income is reflected on the cash flow statement as gross interest rate income.

G.2 General Uncertainty Index

In this subsection, we conduct an exercise that is similar to subsection 4.2. We use an alternative measure of uncertainty to show that the FC liquid asset accumulation is related to FX volatility, rather than general uncertainty. Specifically, we use the Korean World Uncertainty Index, con-

Table 27: Gross Interest Income and Predicted Carry Trade Income

	Gross Interest Income
	(1)
$Predicted\ \ GII_{\text{carrytrade},i,t}$	0.832***
	(0.142)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	0.026
	(0.052)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-0.250***
	(0.021)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-0.346***
	(0.025)
$lnTA_{i,t-1}$	-0.003
	(0.005)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.136***
	(0.043)
Adjusted R^2	0.10
Within R^2	0.01
N	137746

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). *TA* is total assets and *OS* is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. Regressions without the restriction are reported in the Appendix C. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

structed by Ahir et al. (2022). We standardize the variable by its mean and variance so that the standardized variable has zero mean and unit variance. We then perform our baseline regression but include the interaction term of the uncertainty measure with both FC debt and total debt variables. The regression result is reported in Table 28. The coefficients on $\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}} \times (normal\_WUI_{i,t})$ and $\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}} \times (normal\_WUI_{i,t})$ are both *non-positive*. This result indicates a rise in general uncertainty or volatility of the economy doesn't result in larger FC liquid asset accumulation when borrowing in FC, in contrast with what we have documented in subsection 4.2. On the other hand, the accumulation of FC liquid assets is positively associated with *total* debt issuance when uncertainty is high. We believe this finding is consistent with a general precautionary saving motive, but is different from the incentives to set aside FX risk buffers that we emphasize in this paper.

Table 28: FC Debt and FC Liquid Assets:Interaction with General Uncertainty Measure

	Foreign Currency Liquid Assets			
	Sum	Cash	Short-term FI	AR
	(1)	(2)	(3)	(4)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	12.6***	3.1***	0.4***	9.7***
	(1.9)	(0.5)	(0.1)	(1.6)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	4.8***	1.9**	0.3*	2.9***
	(1.2)	(0.7)	(0.2)	(0.6)
$\frac{ST\ FCdebt_{i,t}}{TA_{i,t-1}}$	-1.8*	-0.5	0.1	-1.1
$\times(normal\_WUI_{i,t})$	(1.0)	(0.3)	(0.1)	(1.0)
$\frac{LT\ FCdebt_{i,t}}{TA_{i,t-1}}$	-1.0**	-0.7**	-0.0	-0.7*
$\times(normal\_WUI_{i,t})$	(0.4)	(0.3)	(0.0)	(0.4)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	-0.4*	-0.7***	-0.1**	0.3
	(0.2)	(0.1)	(0.0)	(0.2)
$\frac{ST\ debt_{i,t}}{TA_{i,t-1}}$	0.2	0.2***	0.0	-0.1
$\times(normal\_WUI_{i,t})$	(0.1)	(0.1)	(0.0)	(0.1)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	-2.8***	-0.8***	-0.1***	-1.9***
	(0.5)	(0.1)	(0.0)	(0.3)
$\frac{LT\ debt_{i,t}}{TA_{i,t-1}}$	0.3*	0.2***	0.0**	0.1
$\times(normal\_WUI_{i,t})$	(0.1)	(0.0)	(0.0)	(0.1)
$lnTA_{i,t-1}$	0.5***	0.0	0.0	0.5***
	(0.1)	(0.0)	(0.0)	(0.1)
$\frac{OS_{i,t}}{TA_{i,t-1}}$	0.3	0.6***	0.1***	-0.4
	(0.3)	(0.2)	(0.0)	(0.2)
Adjusted R^2	0.11	0.05	0.01	0.10
Within R^2	0.03	0.01	0.00	0.03
N	145921	146021	146026	145960

Notes: The table show results from annual panel regressions. The sample period is 2001-2017. The dependent variables are the column header (normalized by total assets at $t-1$), which are cash, short-term financial instruments, accounts receivable in local currency (LC) and foreign currency (FC). $1yFXvol$ and $3mFXvol$ are the implied volatility imputed from at-the-money exchange rate options. TA is total assets and OS is the cashflow from other sources. Regressions are restricted to firm-year observations with positive increase in debt level. All regressions include sector and year fixed effects. The coefficients are scaled up by 100 for presentation. The estimated beta can be interpreted as the amount of won increase per 100 won of debt proceeds. Standard errors in parentheses are clustered at the sector level. * p<0.1, ** p<0.05, *** p<0.01.

H Sector Matching with Input-Output Matrix

In this section, we provide detailed information on the matching of the KISVALUE sectors with the Bank of Korea input-output matrix sectors. In the KISVALUE dataset, there are two sector definitions. The MiddleGrouping (67 sectors) and the NarrowGrouping (189 sectors). We make use of the MiddleGrouping in the sectoral heterogeneity (section 5) to construct sector specific financial dependence and export import exposure.

Table 29: KISVALUE Sectors and Bank of Korea Sectors

KISVALUE MidGrouping sector	Bank of Korea sector
A01000/Agriculture	Crops
A02000/Forestry	Forest products
A03000/Fishing	Fishery products
B05000/Mining of Coal, Crude Petroleum and Natural Gas	Mining of coal, crude petroleum and natural gas
B06000/Mining of Metal Ores	Metal ores
B07000/Mining of Non-metallic Minerals, Except Fuel	Non-metallic minerals
B08000/Mining support service activities	Mining of coal, crude petroleum and natural gas
C10000/Manufacture of Food Products	Other food products
C11000/Manufacture of Beverages	Beverages
C12000/Manufacture of Tobacco Products	Tobacco products
C13000/Manufacture of Textiles, Except Apparel	Apparels and other textiles
C14000/Manufacture of wearing apparel, Clothing Accessories and Fur Articles	Leather and fur products
C15000/Tanning and Dressing of Leather , Manufacture of Luggage and Footwear	Leather and fur products
C16000/Manufacture of Wood and of Products of Wood and Cork ; Except Furniture	Wood and wooden products
C17000/Manufacture of Pulp, Paper and Paper Products	Pulp and paper
C18000/Printing and Reproduction of Recorded Media	Printing and reproduction of recorded media
C19000/Manufacture of Coke, hard-coal and lignite fuel briquettes and Refined Petroleum Products	Coke and hard-coal
C20000/Manufacture of chemicals and chemical products (except pharmaceuticals, medicinal chemicals)	Basic chemical products
C21000/Manufacture of Pharmaceuticals, Medicinal Chemicals and Botanical Products	Drugs, cosmetics, and soap
C22000/Manufacture of Rubber and Plastic Products	Plastic products, Rubber products
C23000/Manufacture of Other Non-metallic Mineral Products	Other nonmetallic mineral products
C24000/Manufacture of Basic Metal Products	Pig iron and crude steel, Primary iron and steel products, Nonferrous metal ingots and primary nonferrous metal products
C25000/Manufacture of Fabricated Metal Products, Except Machinery and Furniture	Fabricated metal products except machinery and funiture
C26000/Manufacture of Electronic Components, Computer, Radio, Television and Communication Equipment and Apparatuses	Electronic components and accessories, Audio, video and communications equipment Computer and office equipment
C27000/Manufacture of Medical, Precision and Optical Instruments, Watches and Clocks	Precision instruments
C28000/Manufacture of electrical equipment	Electrical equipment, and supplies
C29000/Manufacture of Other Machinery and Equipment	Machinery and equipment of general purpose, Machinery and equipment of special purpose
C30000/Manufacture of Motor Vehicles, Trailers and Semitrailers	Motor vehicles and parts
C31000/Manufacture of Other Transport Equipment	Other transportation equipment
C32000/Manufacture of Furniture	Furniture

Table 30: KISVALUE Sectors and Bank of Korea Sectors (continued)

KISVALUE MidGrouping sector	Bank of Korea sector
C33000/Other manufacturing	Other manufactured products
D35000/Electricity, gas, steam and air conditioning supply	Electric utilities, Gas and water supply
D36000/Water Supply	Gas and water supply
E37000/Sewage, Wastewater and Human Waste Treatment Services	Sanitary services
E38000/Waste Collection, Disposal and Materials Recovery	Sanitary services
E39000/Remediation activities and other waste management services	Sanitary services
F41000/General Construction	Building construction and repair
F42000/Special Trade Construction	Civil engineering
G45000/Sale of Motor Vehicles and Parts	Wholesale and retail trade
G46000/Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles	Wholesale and retail trade
G47000/Retail Trade, Except Motor Vehicles and Motorcycles	Wholesale and retail trade
H49000/Land Transport ; Transport Via Pipelines	Land transport
H50000/Water Transport	Water and air transport
H51000/Air Transport	Water and air transport
H52000/Storage and support activities for transportation	Strorage and support activities for transportation
I55000/Accommodation	Accommodation and food services
I56000/Food and beverage service activities	Accommodation and food services
J58000/Publishing activities	Publishing and cultural services
J59000/Motion picture, video and television programme production, sound recording and music publishing activities	Publishing and cultural services
J60000/Broadcasting	Broadcasting
J61000/Telecommunications	Communications services
J62000/Computer programming, System Integration and Management Services	Business services
J63000/Information service activities	Business services
L68000/Real Estate Activities	Real estate
L69000/Renting and leasing; except real estate	Other business services
M70000/Research and Development	Research and development
M71000/Professional Services	Other business services
M72000/Architectural, Engineering and Other Scientific Technical Services	Other business services
M73000/Professional, Scientific and Technical Services, n.e.c.	Other business services
N74000/Business Facilities Management and Landscape Services	Other business services
N75000/Business Support Services	Other business services
P85000/Education	Education
Q87000/Social Work Activities	Social work activities
R90000/Creative, Arts and Recreation Related Services	Publishing and cultural services
R91000/Sports activities and amusement activities	Amusement and sports activities
S95000/Maintenance and Repair Services	Other services
S96000/Other Personal Services Activities	Other services